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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SISSON, BRADLEY L	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/029,397	MURPHY ET AL.	
	Examiner	Art Unit	
	Bradley L. Sisson	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46 and 48-90* is/are pending in the application.

4a) Of the above claim(s) *55-82* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46,48-54 and 83-90* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Prosecution Reopened

1. The finality of the Office action of 01 September 2004 is hereby withdrawn. Prosecution on the merits is reopened.

Specification

2. The specification is objected to as documents have been improperly incorporated by reference. In particular, the specification states at page 80 that the documents identified in the following six pages of bibliographic citations "provide exemplary procedural or other details supplementary to those set forth herein, are specifically incorporated herein by reference." Such omnibus language fails to specify what specific information applicant seeks to incorporate by reference and similarly fails to teach with detailed particularity just where that specific information is to be found in each of the cited documents.

Attention is also directed to MPEP 608.01(p)I, which, in pertinent part, is reproduced below:

> Mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. In re de Seversky, 474 F.2d 671, 177 USPQ 144 (CCPA 1973). In addition to other requirements for an application, the referencing application should include an identification of the referenced patent, application, or publication. Particular attention should be directed to specific portions of the referenced document where the subject matter being incorporated may be found. (Emphasis added)

As set forth In *Ex parte* Raible, 8 USPQ2d 1707, (BPAI, 1998)

> The examiner is of the opinion that the general incorporation by reference of the Bentley disclosure in appellant's specification is insufficient to support the specific disputed

> limitations of the present claims in the manner required by section 112 of the statute. We agree
>
> * * *
>
> We believe that the doctrine of incorporation by reference is of no avail to appellant in this regard since there is no specific indication in the instant specification of the particular features disclosed by Bentley which correspond to those intended for use in the here-claimed device; nor does the specification identify the specific portions of the patent which appellant may have intended to rely upon to supplement his disclosure. The purpose of incorporation by reference in an application of matter elsewhere written down is for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found. In re de Seversky , 474 F.2d 671, 177 USPQ 144 , (CCPA 1973).

Accordingly, the cited documents are not considered to have been properly incorporated by reference and as such, have not been considered with any effect towards their fulfilling, either in part or in whole, the enablement, written description, or best mode requirements of 35 USC 112, first paragraph.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As presently worded, the method of claim requires the rRNA sequence to comprise one of SEQ ID NO: 23-69 and 71-73. Upon review of each of these sequences, it is noted that none are of RNA, be it rRNA or otherwise. Rather, each of the sequences represented are of DNA. Accordingly,

the specification does not provide an adequate written description of rRNA having a defined nucleotide sequence, wherein said SEQ ID Nos. are 23-69 and 71-73.

5. For the above reason, and in the absence of convincing evidence to the contrary, claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

6. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 4 requires one to use prokaryotic rRNA comprising the sequence of any one of SEQ ID NO: 23-69 and 71-73. As presented above, none of these sequences are of RNA, be it rRNA or otherwise. The specification fails to set forth a reproducible procedure where one is to be using "rRNA" that is not RNA. For the above reasons, and in the absence of convincing g evidence to the contrary, claim 4 is 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. As presently worded, claim 4 requires one to use rRNA that has the nucleotide sequence of any one of SEQ ID NO: 23-69 and 71-73. None of the nucleotide sequences associated with these SEQ ID Nos. is of an RNA. It is unclear what applicant regards as rRNA. In particular, it is unclear if rRNA is to be construed as only comprising A, C, U, and G residues or can it comprise A, T, C, and G, as is found in he sequence listing. Accordingly, the metes and bounds of the claim cannot be readily determined.

10. Claim 46 is indefinite as a result of the usage of abbreviations "TMAC" and "TEAC." Applicant is urged to consider amending the claims such that the full names of each abbreviation is first used, following with the abbreviation in parenthesis.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.).

15. Lane et al., column 11, teach using probes in a subtractive hybridization method such that rRNA is removed from the sample.

16. Lane et al., columns 27, 29, and 33 teach using probes that bind to 16S and 23S rRNA of *Bacillus subtilis*. This meets a limitation of claims 2-3.

17. Lane et al., column 21, teaches hybridization of probes to rRNA of *Chlamydia* and to *Peptostreptococcus*, organisms that are Gram-negative and Gram-positive prokaryotic organisms, respectively. Also disclosed is the hybridization to rRNA from wheat germ and mouse L-cell, both of which are eukaryotic. This meets a limitation of claims 5-8.

18. Weisburg et al., Figure 1 and column 10, teach using bridging oligonucleotides that have homopolymeric tails. Such bridging oligonucleotides, and their ability to hybridize to complementary sequences, is considered to render obvious the use of nucleic acid sequences, be they comprised of DNA, RNA, PNA, etc. (claim 36).

19. Weisburg et al., columns 5-6, teach using probes that comprise "approximately 10 to 250 nucleotides capable of hybridizing preferentially to rRNA." This meets a limitation of claims 9-13.

20. Figure 1 depicts, and column 10 teaches that the bridging oligonucleotide hybridizes to a capture oligonucleotide comprising a non-reacting structure, which can be a "solid support."

21. Britschgi et al., columns 28- 29, each using solid supports comprising nylon, biotin to capture a target sequence. This meets a limitation of claim 44.

22. Britschgi et al., column 29, teach washing the hybridized target nucleic acid and bead complex. Also disclosed therein is the use of a magnet to facilitate isolation of target nucleic acid- capture probe-bead complexes from sample solution. This meets a limitation of claims 41, 42, 54, and 83.

23. To the degree that the assay is conducted at one or a plurality of temperatures, and may result in varying degrees of removal of targeted nucleic acids, such is considered to be the result of routine optimization and as such does not rise to the level of a patentable distinction over the prior art of record.

24. It is well settled that routine optimization is not patentable, even if it results in significant improvements over the prior art. In support of this position, attention is directed to the decision in *In re Aller, Lacey, and Hall*, 105 USPQ 233 (CCPA 1955):

> Normally, it is to be expected that a change in temperature, or in concentration, or in both, would be an unpatentable modification. Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. In re Dreyfus, 22 C.C.P.A. (Patents) 830, 73 F.2d 931, 24 USPQ 52; In re Waite et al., 35 C.C.P.A. (Patents) 1117, 168 F.2d 104, 77 USPQ 586. Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality. In re Swenson et al., 30 C.C.P.A. (Patents) 809, 132 F.2d 1020,

> 56 USPQ 372; In re Scherl, 33 C.C.P.A. (Patents) 1193, 156 F.2d 72, 70 USPQ 204. However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 C.C.P.A. (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 C.C.P.A. (Patents) 1248, 150 F.2d 708, 66 USPQ 308; In re Irmscher, 32 C.C.P.A. (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 C.C.P.A. (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D. C. 324, 135 F.2d 11, 57 USPQ 136. (Emphasis added)

25. In view of the preceding remarks, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Lane et al., with that of Weisburg et al., and Britschgi et al., as such would have allowed the ordinary artisan to effectively remove rRNA from a sample via subtractive hybridization where the hybridized rRNA is bound to a non-reactive support, such as a magnetic bead, that can in turn be isolated from the sample, thereby permitting the further analysis of nucleic acids remaining in the sample. In view of the detailed teachings in the prior art, the ordinary artisan would have been amply motivated and would have had a most reasonable expectation for success.

26. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of Gen Bank Accession No. X60622 (Gen Bank).

27. Gen Bank teaches applicant's SEQ ID NO: 23. This meets a limitation of claim 4.

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have adapted the method of Lane et al., with that of Weisburg et al., and Britschgi

et al., such that the prokaryotic sequence of applicant's SEQ ID NO: 23 was used as such was known in the art at the time of the invention. Motivation is using this sequence is found in Lane et al., who teach the broad applicability of a method of removing rRNA from a sample.

29. For the above reasons, and in the absence of convincing evidence to the contrary, claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of Gen Bank Accession No. X60622 (Gen Bank).

30. Claims 14-31 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of US Patent 6,274,723 B1 (Nilsen).

31. See above for the basis of the rejection as it relates to the disclosures of Lane et al., Weisburg et al., and Britschgi et al.

32. Neither Lane et al., Weisburg et al., nor Britschgi et al., teach using probes that comprise a plurality of regions where a plurality of target or capture sequences can bind.

33. Nilsen teaches at length of the development of and advantages of using dendritic probes, which as seen in Figure 2A-2D, and Fig. 5 can comprise two or more regions that allow for hybridization.

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have adapted the method of Lane et al., Weisburg et al., and Britschgi et al., such

that dendritic probes such as those disclosed by Nilsen were used as such probes would allow for greater binding of rRNA, thereby enhancing the deletion of rRNA from the sample. In view of the detailed teachings, well-developed state of the art, and advanced skill level of the ordinary artisan, said ordinary artisan would have been both amply motivated and would have had a most reasonable expectation of success.

35. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.), US Patent 5,712,095 (Britschgi et al.), and US Patent 6,274,723 B1 (Nilsen) as applied to claims 1-31, 33-44, 54, 83, 84, and 86-90 above, and further in view of US Patent 5,679,520 (Hogan et al.).

36. See above for the basis of the rejection as it relates to the disclosures of Lane et al., Weisberg et al., Britschgi et al., and Nilsen.

37. Neither Lane et al., Weisburg et al., Britschgi et al., nor Nilsen teach the targeting regions recited in claim 32.

38. Hogan et al., Sequence Listing (SEQ ID NO: 1), and claims 3 and 38, explicitly teach applicant's SEQ ID NO: 1, and that it is complementary to bases 330-365 of *E. coli* 16S rRNA.

39. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized SEQ ID NO: 1 of Hogan et al., in the combined method of Lane et al., Weisburg et al., Britschgi et al., and Nilsen as such would have allowed for subtractive hybridization of 16S rRNA found in the prokaryote *E. coli*. In view of the detailed guidance provided, the explicit teachings of the desire to remove rRNA from a sample, including that of prokaryotes, the removal of rRNA associated with the bacteria *E. coli*, the ordinary artisan would

have been amply motivated to have done such and would have had a most reasonable expectation of success.

40. Claims 48-53 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of US Patent 6,448,387 B1 (Slater et al.).

41. While Lane et al., teaches performing subtractive hybridization so to remove rRNA from a sample, they do not each synthesis of cDNA from the remaining mRNA, nor the manufacture of an array comprising said cDNA or its use.

42. Neither Weisburg et al., nor Britschgi et al., overcome this deficiency.

43. Slater et al., column 10, teaches preparing and using an array that comprises cDNA. As disclosed herein, the support upon which the array is fashioned is nylon. Additional, non-limiting supports upon which an array can be fashioned are disclosed at column 6.

44. In view of the preceding disclosures made of record, it would have been obvious tone of ordinary skill in the art at the time the invention was made to have modified the method of Lane et al., Weisburg et al., and Britschgi et al., with the cDNA array of Slater et al., as such would have allowed the ordinary artisan the benefit of first removing rRNA sequences from a sample prior to the synthesis of cDNA from the remaining mRNA, thereby allowing for a cleaner, more uniform cDNA product, not to mention the ability to now use the cDNA to detect level of gene expression. In view of the detailed guidance provided, the ordinary artisan would have also had a most reasonable expectation of success. For the above reasons, and in the absence of

convincing evidence to the contrary, claims 48-53 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of US Patent 6,448,387 B1 (Slater et al.).

45. Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of US Patent 5,084,565 (Parodos et al.).

46. See above for the basis of the rejection as it relates to the disclosures of Lane et al., Weisberg et al., Britschgi et al., and Nilsen.

47. Neither Lane et al., Weisburg et al., Britschgi et al., nor Nilsen teach the combined use of biotin with either avidin or streptavidin in combination with rRNA hybridization.

48. Parodos et al., column 10, teaches explicitly of using the interaction of biotin with streptavidin in concert with hybridization or rRNA from *E. coli.*

49. In view of the foregoing disclosures, it would have been obvious to one of ordinary skill in the art to have combined the use of biotin and streptavidin in a hybridization reaction as disclosed by Parodos et al., with the combined method of Lane et al., Weisburg et al., and Britschgi et al., as such would have allowed for an effective and facile means for isolating hybridization complexes from a sample. For the above reasons, and in the absence of convincing evidence to the contrary, claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.) and US

Patent 5,712,095 (Britschgi et al.) as applied to claims 1-3, 5-13, 36-44, 54, 83, 84, and 86-90 above, and further in view of US Patent 5,084,565 (Parodos et al.).

50. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.), US Patent 5,712,095 (Britschgi et al.), and US Patent 5,084,565 (Parodos et al.) as applied to claims 1-3, 5-13, 36-45, 54, 83, 84, and 86-90 above, and further in view of US Patent 6,326,485 B1 (Vasta et al).

51. Neither Lane et al., Weisburg et al., Britschgi et al., nor Parodos et al., teach using TMAS or TEAC in a hybridization buffer.

52. Vasta et al., columns 15-16, teach using TMAC in a buffer where hybridization between target and probe/primer sequences occurs.

53. It would have been obvious to one of ordinary skill in the art at the time the invention we made to have utilized TMAC in the subtractive hybridization method of Lane et al., Weisburg et al., Britschgi et al., and Parodos et al., *supra*, as the inclusion of TMAC in a hybridization buffer was already known and in use at the time of the invention. In view of the detailed teachings, the ordinary artisan would have had a most reasonable expectation of success. For he above reasons, and in the absence of convincing evidence to the contrary, claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,401,631 (Lane et al.) in view of US Patent 5,843,667 (Weisburg et al.), US Patent 5,712,095 (Britschgi et al.), and US Patent 5,084,565 (Parodos et al.) as applied to claims 1-3, 5-13, 36-45, 54, 83, 84, and 86-90 above, and further in view of US Patent 6,326,485 B1 (Vasta et al).

Conclusion

54. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (571) 272-0751. The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

55. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached on (571) 272-0745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

56. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bradley L. Sisson
Primary Examiner
Art Unit 1634

BLS
08 March 2005